ROUTE CONCEPT REPORT

ROUTE 254 CORRIDOR

01-HUM-254-KP 0.0/74.8 (PM 0.0/46.5)

All information in this Route Concept Report is subject to change as conditions change and new information is obtained.

I approve this Route Concept Report as an analysis and conceptual long-range planning guide for Caltrans, our Regional Transportation Planning Partners, local entities and the public.

Approval Recommended:

6/14/01

CHARLIE FIELDER Date
Deputy District Director
Program/Project Management

Approval Recommended:

6/11/01

CHERYL S. WILLIS Date
Deputy District Director
Planning

Approved:

6/15/01

RICK KNAPP Date
District Director
District 1

JUNE 2001

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ROUTE CONCEPT REPORT

Statement of Planning Intent

The Route Concept Report (RCR) is a planning document which describes the Department's conceptual improvement options for a given transportation route or corridor. Considering reasonable financial constraints and projected travel demand over a 20-year planning period, the RCR considers transportation facility needs for each route or corridor. The RCR is a tool for implementing interregional and statewide continuity of the State's transportation network, and will be updated as needed as conditions change, or new information is obtained.

Purpose of the Route Concept Report

The objective of the RCR is to have local, regional, and state consensus on route or corridor concepts, improvement goals, and strategies. This document provides concept information only and does not determine policy nor establish a course of action. Route Concept Reports are prepared by District staff in cooperation with local and regional agencies.

Assumptions

The following assumptions form the basis for the development of Route Concept Reports:

1. The relative importance of State highways in the District is generally based on functional classification. In general, higher priority is given to major improvements on principal arterial routes as compared to minor arterials and collectors.

2. State highways with improvement concepts must have realistic concept levels of service. Concept levels of service are not established on State highways that will only be maintained (since improvements would not be made to address level of service concerns).

3. Level of service calculations are based on the 1997 Highway Capacity Manual.

4. Determinations of future level of service for State highways in District 1 are based in part upon Statewide and Regional forecasts of State highway travel developed by Caltrans.

5. Route concepts apply generally to an entire route or corridor, unless there are overriding considerations (e.g. a major change in function along the route or feasibility concerns).

6. Major projects will be developed to meet design standards acceptable to the Federal Highway Administration in order to receive Federal funding for projects. Otherwise, a "design exception" must be secured during the project development process.

7. Safety projects will be pursued on an on-going basis in order to be responsive to safety concerns as they are identified.

8. No planned or programmed improvements were assumed to be complete in analyzing present and future operating conditions. The Route Concept Report details programmed improvements in the 1998 STIP and the 1998 STIP Amendment.

9. Environmental documents are not required for Route Concept Reports. Individual improvement projects identified in Route Concept Reports will follow established environmental processes when development is proposed as required by law.

ROUTE CONCEPT REPORT

ROUTE 254

01-HUM-254-KP 0.0/74.8 (PM 0.0/46.5)

I. ROUTE CONCEPT AND RATIONALE

FACILITY CONCEPT

The concept for Humboldt County's Route 254 is 2-lane conventional highway on existing alignment.

Route 254, also known as Avenue of the Giants, roughly parallels Route 101 from the Sylvandale Interchange to just north of Pepperwood. The route is a continuous stretch extending approximately 32 miles through Humboldt County.

Route 254 is functionally classified as a Rural Major Collector. The route is used both as a connector for unincorporated communities located in the corridor and as a recreational route. Route 254 experiences seasonally heavy non-motorized traffic in and near the communities of Phillipsville, Miranda, Myers Flat, Weott, and Redcrest. The route provides access to several state parks that are known for their magnificent stands of old growth redwoods. It has recreational access to the Eel River, which is popular for swimming and fishing, and it is available as a secondary route in the event of a closure on Route 101.

LEVEL OF SERVICE CONCEPT

No level of service concept has been selected for Route 254.

Route 254 currently operates at a "B" level of service. Portions of the route are expected to fall to a LOS "C" by 2020. However, no improvements will be made to address reductions in level of service.

ROUTE CONCEPT FUNCTION

This Route Concept should serve as a tool for long range planning for Route 254. It provides recommendations to protect the state's investment in this Route, while recognizing financial constraints which will not allow the programming of extensive improvements for all highways.

II. ROUTE MANAGEMENT STRATEGIES

REHABILITATION STRATEGY

Route 254 should be maintained as necessary.

Based on functional classification, traffic volumes and maintenance service levels, Route 254 in District 1 should be maintained as necessary at its present width and on its existing alignment. Portions of the route may be rehabilitated on an exception basis, when maintaining the facility would be less cost effective than rehabilitating it.

SAFETY AND OPERATIONAL IMPROVEMENT STRATEGY

Route 254 has one segment (HUM-254-KP 0.0/19.8 or PM 0.0/12.3) which has a collision rate higher than the statewide average (based on similar facilities). **Safety improvements at spot locations will be considered as necessary.**

Bridge replacement and storm damage projects will also be considered as necessary, and operational improvements will be considered on an exception basis. These projects, in addition to safety projects, should be constructed to established State and Federal standards (rather than the present width concept).

In the late 1980's, Caltrans barrier striped two-lane highways to comply with Federal standards. This reduced the number of passing opportunities (and the level of service) on most two-lane highways. The impact of barrier striping is expected to be less severe on Route 254 than other routes within the District, since traffic volumes are generally low on this route and Route 101 is available as a main route for higher speed through traffic.

GOODS MOVEMENT STRATEGY

Consistent with the relatively low truck traffic volumes on this Route, and the availability of a through route constructed to modern standards, no goods movement improvement projects are planned for Route 254 at this time.

NON-MOTORIZED FACILITIES STRATEGY

Shoulders and lanes on Route 254 are relatively narrow at spot locations. The numerous state parks located in this area cause the route to experience moderate to seasonally heavy non-motorized traffic, concentrated in the communities and near the campgrounds along the corridor. While no bicycle or pedestrian improvements have been identified along the Route 254 corridor at this time, citizen groups along the corridor have voiced an interest in establishing a bicycle/pedestrian path adjacent to but separate from the route. State Park representatives have expressed concern with the possible damage to old growth redwood trees that could occur as a result of this addition. Caltrans staff will work with Humboldt County Association of Governments to implement high priority non-motorized improvements as they are identified.

CORRIDOR PRESERVATION STRATEGY

It is anticipated that Route 254 will remain a 2-lane conventional highway, on existing alignment. No substantial long-term right of way needs are anticipated.

III. ALTERNATIVE CONCEPTS CONSIDERED

Based upon the adopted Regional Transportation Plan, no alternative concepts were considered for Route 254 in District 1.

IV. ROUTE ANALYSIS

DESCRIPTION

Route 254 is a 32 mile long segment of Old Highway 101 that parallels new freeway/expressway construction along the Eel River as it runs through the Humboldt Redwoods State Park. It is designated as the "Avenue of the Giants" and experiences seasonally heavy recreational traffic as well as providing local service for several small communties along the route.

Route 254 originates near the Sylvandale Interchange on Route 101 and follows Route 101 to Stafford, completely within Humboldt County. The kilometer post description for Route 254 is 01–HUM-254-KP 0.0/74.8 (PM 0.0/46.5).

ROUTE PURPOSE

Route 254 is used primarily as an access route for the numerous state parks, and local communities located along the route. As such it provides access to magnificent stands of old growth redwoods, as well as to the Eel River, which is popular for swimming and fishing. Route 254 is also available as a detour in the event of a closure on adjacent Route 101.

ROUTE SEGMENTATION

Route 254 is segmented as follows for system planning purposes:

TABLE 1
ROUTE 254 SEGMENTATION

SEG #	HUM		DESCRIPTION
	KP	PM	
1	0.0/19.8	0.0/12.3	Route 101 to Myers Flat
2	19.8/74.8	12.3/46.5	Myers Flat to Route 101 at Jordan Road

LAND USE

Land use adjacent to Route 254 is expected to remain as currently developed (a mix of park lands and low intensity multiple use). The communities located along Route 254 include Phillipsville, Miranda, Myers Flat, Weott, and Redcrest, all of which have populations of less than 500 people. In addition, Humboldt Redwoods State Park is located virtually throughout the route. Some of the better known units of this park include Hidden Springs, Burlington and Albee Creek, all of which allow overnight camping. Williams Grove, Bull Creek, and Dyerville units allow day use only. Little additional development is anticipated along this route.

EXISTING FACILITIES

Table II below summarizes existing facility characteristics for the Route 254 corridor in District 1.

TABLE II
EXISTING FACILITY CHARACTERISTICS
ROUTE 254

SEG #	HUM		DESCRIPTION	EXISTING FACILITY
	KP	PM		
1	0.0/19.8	0.0/12.3	Route 101 to Myers Flat	2-lane conventional
2	19.8/74.8	12.3/46.5	Myers Flat to Route 101 at Jordan Road	2-lane conventional

Functional Classification	Rural Major Collector
Eligible for Federal Funding	Yes
Freeway and Expressway System	No
Eligible for Scenic Highway Designation	Yes
Subsystem of Highways for	
Extra Legal Loads (SHELL)	No
Surface Transportation Assistance Act (STAA) Trucks Allowed:	No
Strategic Highway Network	No
National Highway System	No
Interregional Road System	No
Public Airports Served	None
Rail Service	None
Intercity Bus Service:	Greyhound
Intersecting State Highway Routes	101
Park and Ride Lots	None

OPERATING CONDITIONS

Present and future operating conditions, including traffic volume ranges, level of service, and volume to capacity ratios for both existing and anticipated future conditions for Route 254 are shown on Map 1 on the following page. Further information regarding specific operating and geometric conditions may be found in Caltrans source documents (e.g., the State Highway Inventory, the State Highway Log, and Traffic Volumes on California State Highways, etc.)

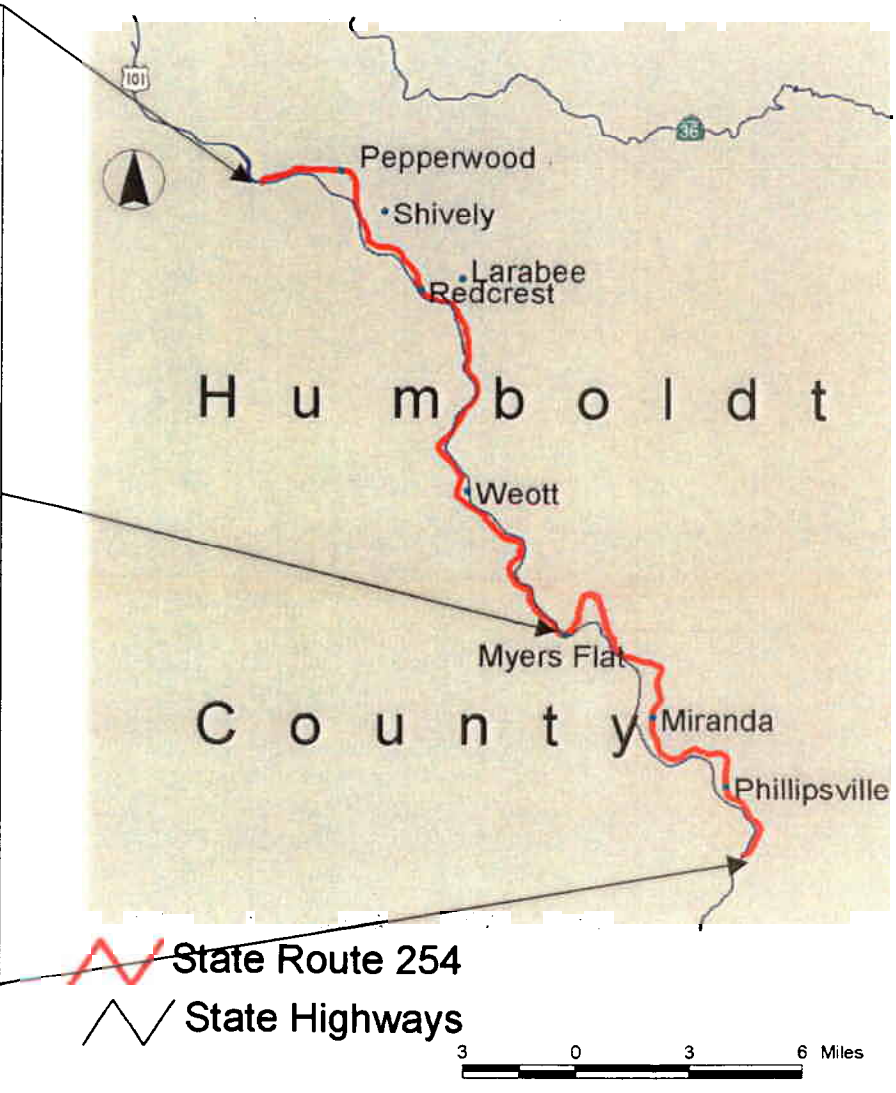
PROGRAMMED IMPROVEMENTS

No improvement to Route 254 is programmed in the 2000 State Transportation Improvement Program (STIP). A storm damage project valued at $1.3 million has been programmed in the 2000 State Highway Operation and Protection Program (SHOPP).

MAP 1
PRESENT AND FUTURE OPERATING CONDITIONS
ROUTE 254

HUM-254-KP 19.8/74.8 (PM 12.3/46.5)
Terrain: Rolling
Gradeline: Rolling
Existing (2000)
2-lane conventional
3.6 m (12' lanes)
9.5 –16.0 m (26' – 44') paved width
600 AADT
"B" LOS
V/C = 0.09
Collision rate = less than 1.5 times
The statewide average
Trucks = 5%
Future (2020)
800 AADT
"B" LOS
V/C = 0.12

HUM-254-KP 0.0/19.8 (PM 0.0/12.3)
Terrain: Rolling
Gradeline: Rolling
Existing (2000)
2-lane conventional
3.6 m (12' lanes)
9.5 –16.0 m (26' – 44') paved width
900 AADT
"B" LOS
V/C = 0.14
Collision rate = greater than 1.5 times
The statewide average
Trucks = 5%
Future (2020)
1150 AADT
"C" LOS
V/C = 0.17



V. ENVIRONMENTAL CONSIDERATIONS

Environmental considerations along Route 254 include:

- Rare and sensitive plant and animal species are located adjacent to Route 254 at numerous locations.
- The Eel River, a Wild and Scenic River, provides important instream and riparian habitat. There are sensitive species associated with the river and its tributaries including a variety of federally listed plants and animals.
- Route 254 has archaeological and culturally significant sites where the local Native American Tribe (Wiyot) gathers food and materials necessary for everyday life. There are sites where their ancestors lived and are buried and sacred sites associated with religious activity.

VI. REGIONAL TRANSPORTATION PLANNING

The 1998/00 Humboldt County Regional Transportation Plan was prepared by the Humboldt County Association of Governments (HCAOG), and presented the following considerations:[1]

State Routes

The needs identified for State Routes consist of long term maintenance for the various routes. Some improvements are necessary to improve alignment, grade and safety, primarily in substandard areas. Passing lane opportunities are also needed in some areas to continue mitigation of Federal barrier striping standards. Generally, LOS and volume to capacity ratios remain adequate. As a result, capacity increasing projects have not been identified as needs on these routes (partially due to the terrain and lack of right-of-way), and given funding realities, are not likely to be recommended in the foreseeable future.

VII. AREAS OF CONCERN

The following criteria are used by Caltrans to identify areas of concern on Route 254 based on an analysis of level of service and collision history:

1. A segment is considered to be a "level of service concern" if the concept level of service (LOS) will not be achieved under present or future traffic conditions, or the segment operates at capacity during peak-hour.
2. A segment is considered to be a "safety concern" if the total collision rate for a five-year period for that segment exceeds one and one-half times the Statewide average for similar facilities.

[1] 1998-00 Regional Transportation Plan for Humboldt County, Humboldt County Association of Governments, pg. 70

Based on these criteria, one segment was identified as an area of concern, due to collision history: HUM-254-KP 0.0/19.8 or PM 0.0/12.3, which has 3.06 collisions per million vehicle miles compared to the statewide average based on similar facilities of 1.76. The District has an established collision surveillance and monitoring process, which investigates and recommends safety improvements for specific locations with historic collisions concerns as they are identified.

VIII. IMPROVEMENTS RECOMMENDED TO ACHIEVE THE ROUTE CONCEPT

No new facility improvements are recommended to achieve the route concept (2-lane conventional highway on existing alignment) through the twenty-year period. Safety improvements should be made, as necessary and operational improvements should be considered on an exception basis.

IX. TRANSIT AND HIGH OCCUPANCY VEHICLE (HOV) CONSIDERATIONS

Low population densities make it difficult to provide cost-effective transit services for Route 254. Due to the rural nature of Route 254 and relatively low peak hour traffic volumes during commute hours, no HOV considerations are necessary at this time.

X. ACCESS MANAGEMENT

Access management involves managing where vehicles are allowed to enter the highway, to improve highway operations and reduce collision potential.

Access management is not likely to be a concern on Route 254, primarily due to low traffic volumes. Further, with little change in land use anticipated, access management is not likely to be a future concern.

XI. ADOPTIONS, RESCISSIONS AND RELINQUISHMENTS

New or changed highway routings generally require adopting a new route and rescinding the previously adopted route. The Route may also be relinquished to a city, county or other public entity.

No significant adoptions, rescissions, or relinquishments are anticipated on Route 254 in District 1.

APPENDIX A
Level of Service (LOS)

LOS		Description of Typical Traffic Conditions	Delay	Service Rating
A		Highest quality of service. Free traffic flow, low volumes and densities. Little or no restriction on maneuverability or speed, and a high level or comfort and convenience.	None	Excellent
B		Stable traffic flow – speed becoming slightly restricted. the presence of others in the traffic stream begins to be noticeable. Low resistance on maneuverability.	None	Very Good
C		Stable traffic flow, but less freedom to select speed, change lanes or pass. Comfort and convenience Decreasing as density increases.	Minimal	Good
D		Approaching unstable flow. Speeds tolerable, but subject to sudden and considerable variation. Reduced maneuverability, driver comfort and convenience.	Minimal	Adequate
E		Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability and low driver comfort and convenience.	Significant	Fair
F		Forced traffic flow. Speed and flow may drop to zero with high densities, Queues tend to form behind such locations since arrival flow exceed traffic discharges.	Considerable	Poor